

REMARKS

The applicants appreciate the Examiner's thorough examination of the application and request reexamination and reconsideration of the application in view of the preceding amendments and the following remarks.

The Examiner rejects claims 4, 5, and 7 under 35 U.S.C. §112, first paragraph as allegedly failing to comply with the written description requirement. The Examiner alleges the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The applicants respectfully disagree with the Examiner.

Claim 4 recites: "An on-board unit according to claim 1, wherein said on-board unit further includes a receiver for receiving a signal emitted by another on-board unit, said on-board unit further including means for determining a position of said on-board unit and for preparing a message including an identification of said other on-board unit, a time and location of receiving said identification of said other on-board unit and an identification of said on-board unit, said message being transmitted to said central location when communication with said central location can be effected."

The applicants' specification clearly discloses an on-board unit that includes a receiver for receiving a signal emitted by another on-board unit:

The on-board unit 10 is also provided with another communication system 13, which forms part of the present invention....

Alternatively, when the on-board unit has failed to communicate with the central location, there is a presumption that the vehicle including the unit 10 is either out-of-range of the wireless network, or has had its transmitter disabled or torn out.

When this condition occurs, the unit 10 activates the secondary communication system 13. The secondary communication system thus emits a signal.

The emitted signal by the secondary system 13 is received by a device which can communicate directly or indirectly with the central location. This device or receiver, denoted R on Fig. 1, can be a wireless telephone, a personal digital assistant with wireless communication means, a dedicated device or a vehicle location unit, or an on-board unit 10 such as a unit sold under the trade-mark BOOMERANG®.

Applicants' specification, page 4, line 3 – page 5, line 4, emphasis added.

The remaining features as recited in claim 4 above are disclosed in the applicants' specification on page 4, line 8 - page 5, line 9 (emphasis added):

The other communication system 13, or secondary system 13, is adapted to send, over an RF band, a message containing an identification of the on-board unit 10. Preferably, the message can also contain other status information, such as the fact that the on-board unit 10 is located on a vehicle that has been stolen, and advantageously information about the status of the vehicle if the on-board unit 10 is in communication with other systems present on the vehicle....

When the receiver R is proximate the on-board unit 10, it receives the ID of the on-board unit 10. For example, in Fig. 1, R2 is located proximate S1 and receives the ID of the on-board unit 10. If R2 can communicate with the central location, it relays to the central location its own ID, its location and the ID of S1. Consequently, the central location can take the appropriate measures to attempt to locate the stolen vehicle S1.

Moreover, additional disclosure for the features of claim 4 is disclosed in U.S. Patent No. 5,895,436, which has been incorporated by reference into the subject application, and in International Application Nos. PCT/CA01/00130 and PCT/CA01/01334, both in the name of the instant Assignee. One skilled in the art, when reading the applicants' specification in light of the disclosure discussed above and the aforementioned patent and patent applications, would find adequate disclosure that the inventors had possession of the claimed invention as recited in claim 4 at the time the application was filed.

Accordingly, for the reasons stated above, claim 4 complies with the written description requirement of 35 U.S.C. §112, first paragraph.

Claim 5 recites: “An on-board unit according to claim 4, wherein said message is stored in a memory until communication with said central location can be effected” As shown in the applicants’ specification, on page 4, lines 4-5, a memory is clearly disclosed: “Preferably, on-board unit 10 is also provided with a memory” (emphasis added). As further disclosed in the applicants’ specification the memory stores the internal memory ID of the S1 receiver and sends it to a central location as soon as communication can be established:

If however R2 cannot communication with the central location, i.e. it is out of range itself, or it is being jammed, it stores in its internal memory the ID of S1, and will send it to the central location as soon as communication with the central location can be established. Advantageously, if the receiver R2 is provided with geo-positioning means, it can also store the coordinates and time at which the signal emanating from S1 were received, to facilitate the work of the tracking vehicle.

Applicants’ specification, page 5, lines 10-15, emphasis added.

Accordingly, claim 5 complies with the written description requirement of 35 U.S.C. §112, first paragraph.

Claim 7 recites: “A system according to claim 6, wherein said system further includes a plurality of vehicles, at least one of said vehicles being equipped with an on-board unit according to claim 4.” As discussed above, the on-board unit includes a receiver. As recited in the applicants’ specification, page 5, lines 16 – 20, each vehicle in a fleet of vehicles can be equipped with a receiver of the on-board unit and operate as a kinetic network:

In an advantageous embodiment of the invention, each vehicle in a fleet of vehicles, for example a fleet of delivery vehicles, could be equipped with receivers. Since these vehicles are constantly in motion in a relatively large geographic area, the plurality of receivers acts as a “kinetic network”.

Applicants’ specification, page 4, lines 16-20, emphasis added.

Therefore, claim 7 complies with the requirements of 35 U.S.C. §112, first paragraph.

Accordingly, for the reasons stated above, the Examiner's rejection of claims 4, 5, and 7 under 35 U.S.C. §112, first paragraph should be withdrawn.

The Examiner rejects claims 1-3 under 35 U.S.C. §103(a) as being unpatentable over Fish *et al.* (U.S. Patent No. 6,490,513). The Examiner alleges that Fish *et al.* discloses an on-board unit that includes a primary communication system adapted to communicate with a remote location and being further adapted to detect stolen condition or receive an indication of a stolen condition, means for determining whether communication with a central location can be affected, and a secondary communication system that allegedly transmits a signal when communication with a central location cannot be effected. The Examiner indicates it would have been obvious to one skilled in the art that the vehicle identification would be included in the signal communicated to the central monitoring system because the vehicle identification is used to identify the vehicle.

Conventional location systems typically locate a stolen vehicle by sending signals over a wireless network to a unit on board the vehicle. However, wireless network coverage is not universal, and is generally not available in remote locations. Furthermore, some wireless networks cannot communicate in certain circumstances, e.g., deep within underground garages. Thieves are also becoming more sophisticated and are equipped with jammers which jam wireless signals.

As a result, there can be times when the on-board unit "knows" the vehicle has been stolen, and is emitting the proper signals, but these signals are not being received by a central location since there is no communication therewith. It is therefore almost impossible to locate such vehicles.

The applicants' invention overcomes these problems by sending and receiving information to and from devices in vehicles (e.g., a wireless telephone, a personal digital assistant with communication means, a vehicle location unit, or an on-board unit, such as an on-board unit sold under the trademark BOOMERANG®), which are not part of a traditional wireless network carrier's infrastructure. Thus, the devices in the vehicles become a mobile wireless network. When one of these devices encounters an activated transmitter signal of the on-board unit on the stolen vehicle, that device sends a signal through the traditional wireless network, revealing the last position where it encountered the activated transmitter. The activated transmitter can emit a signal which is received by the device, e.g., another on-board unit on one of a fleet of vehicles, which in turn can communicate with the central location directly or indirectly and provide the central location with the identification of the on-board unit, as well as the device's location for generally locating the on-board unit. *See* Applicants' specification, page 2, lines 11-20 and page 4, line 3 - page 5, line 19.

The applicants' claimed on-board unit for a vehicle as recited in claim 1 includes: 1) a primary communication system, the primary communication system being adapted to communicate with a remote location, the primary communication system being further adapted to detect a stolen condition or receive an indication of a stolen condition; 2) means for determining whether communication with a central location can be effected, and 3) a secondary communication system, the secondary communication system transmitting a signal including an identification of the on-board unit when communication with said central location cannot be effected.

In contrast, Fish *et al.* does not teach, suggest, or disclose a secondary communication system that transmits a signal including an identification of the on-board unit when

communication with the central location cannot be effected.

Instead, the alleged secondary communication system (emergency transponder 38) of Fish *et al.* is remotely activated by service provider 13 when the vehicle has been stolen. The trusted third party (TTP) or service provider activates the emergency transponder:

In an alternative embodiment, the emergency transponder 38 of data archive 10 may be remotely activated by the service provider 13, where the vehicle has been stolen or otherwise lost. For example, a vehicle operator may report his vehicle stolen to a law enforcement agency, the agency may then notify TTP 15 or service provider 13 to activate the emergency transponder 38. Those skilled in the art will recognize that any number of transmission frequencies/protocols may be utilized by emergency transponder 38. (Col. 8, lines 31–40, emphasis added.)

More proof that Fish *et al.* teaches activating the alleged secondary communication system (emergency transponder 38) from the TTP is shown by:

The data processor 50 of service provider 13 communicates control information with emergency transponder module 56, key transmitter 52 and data receiver 54. Specifically, the data processor 50 provides control data to key transmitter 52 and to emergency transponder module 56 for remotely activating an emergency transponder 38. The data processor 50 may determine, for example, when to initiate periodic communication via key transmitter 52 (i.e., frequency of transmission/reception) in accordance with an instruction set. (Col. 9, lines 55-65, emphasis added.)

Finally, the alleged secondary communication system as disclosed by Fish *et al.* (emergency transponder 38) is actuated when power is lost as a result of a catastrophic collision. The emergency transponder then actuates a beacon signal to track the data archive.

The emergency transponder 38 of the exemplary embodiment, is provided for locating the data archive 10. For example, in a catastrophic vehicle collision, data archive 10 may be separated from vehicle 5. Once the vehicle power source is disconnected, the emergency transponder 38 produces an audible signal via speaker 30 to alert an operator of a power interruption and that local power supply 26 is being utilized. After a predetermined period, the audible signal is discontinued an electronic beacon signal of emergency transponder 38 is actuated. (Col. 8, lines 19-28, emphasis added.)

Clearly, Fish *et al.* does not teach, suggest or disclose a secondary communication system that transmits a signal including the identification of the on-board unit when communication with the central location cannot be effected as recited in applicants' claim 1. As shown above, Fish *et al.* teaches and discloses utilizing the TTP or service provider to activate the alleged secondary communication device (emergency transponder 38) to locate data archive 10 (a system that stores vehicle data, such as information provided by data sensors that may include accelerometers, strain gauges, and the like). There is no communication from the alleged secondary communication system of Fish *et al.* to the central location that includes the identification of the on-board unit. The beacon signal emitted after a catastrophic collision clearly does not include identification of the on-board unit when the communication with the central location cannot be effected. The beacon signal is simply used for tracking the data archive.

In sharp contrast, the applicants' claimed secondary communication system transmits a signal including the identification of the on-board unit is a message that contains an identification of the on-board unit. The message also contains other status information, such as the fact that the on-board unit is located on the vehicle has been stolen and information about the status of the vehicle. *See* applicants' specification, page 4, line 8 – line 12. The claimed secondary communication system is adapted to send and receive and is activated when the on-board unit has failed to communicate with the central location. When this condition occurs, the secondary communication system will emit a signal that includes identification of the on-board unit that is received by a device that can communicate directly or indirectly with the central location. *See* applicants' specification, page 4, lines 27 – 31.

Therefore, Fish *et al.* does not teach, suggest or disclose the secondary communication system transmitting a signal including an identification of the on-board unit when communication with said central location cannot be effected, as recited in applicants' claim 1.

Fish *et al.* also does not teach, suggest or disclose means for determining whether communication with a central location can be effected, as recited in applicants' claim 1. As discussed above, the alleged secondary communication system of Fish *et al.* receives a signal from the TTP which is used to activate the alleged secondary communication system. The emergency transponder module is used to create an activation signal to enable the alleged secondary communication system which receives an activation signal from the TTP. Hence, if the alleged secondary communication system (emergency transponder 38) receives signals from the TTP or service provider, it cannot be used for determining whether communication with the central location can be effected.

Therefore, Fish *et al.* does not teach, suggest or disclose means for determining whether communication with a central location can be effected, as recited in Applicants' independent claim 1. Instead, Fish *et al.* actually teaches away from a means for determining whether communication with the central location can be effected.

Accordingly, for the reasons stated above, claim 1 is allowable and patentable under 35 U.S.C. §103(a) over Fish *et al.* Because claims 2 and 3 depend from an allowable base claim, claims 2 and 3 are allowable and patentable under 35 U.S.C. §103(a) over Fish *et al.*

The Examiner also rejects claims 4-8 under 35 U.S.C. §103(a) as being unpatentable over Fish *et al.* in view of Beier *et al.* Because claims 4-8 depend from an allowable base claim, these claims are also allowable and patentable over Fish *et al.* in view of Beier *et al.*

Each of the Examiner's rejections has been addressed or traversed. Accordingly, it is respectfully submitted that the application is in condition for allowance. Early and favorable action is respectfully requested.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned or his associates collect in Waltham, Massachusetts, at (781) 890-5678.

Respectfully submitted,



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